

be performed by said computation means with a plurality of processing timings in a plurality of processing units each corresponding to a process performed on n bits of pre-encoding data, wherein each of said plurality of processing units is parallel processing performed on a plurality of computation results obtained for 2^n states with one of said plurality of processing timings immediately preceding a present timing of said plurality of processing timings to obtain computation results with said present processing timing for said 2^n states.

a² --2. (Amended) The decoding apparatus according to claim 1, further comprising a memory for storing said computation results obtained with said immediately preceding processing timing and said present processing timing, wherein during each of said processing units said computation results obtained for said 2^n states with said immediately preceding processing timing are read from a storage area of said memory and said computation results found with said present processing timing for said 2^n states are stored in said storage area.

--3. (Amended) A decoding method for performing a maximum-likelihood decoding process based on a Viterbi algorithm on a data train completing a convolution-encoding process, comprising the step of performing a trellis computation for decoding said data train completing said convolution-encoding process with a plurality of processing timings in a plurality of processing units each corresponding

to a process carried out on n bits of pre-encoding data, wherein each of said processing units is parallel processing performed on a plurality of computation results obtained for 2^n states with one of said plurality of processing timings immediately preceding a present one of said processing timings to find computation results with said present processing timing for said 2^n states.

a² --4. (Amended) The decoding method according to claim 3, wherein in each of said plurality of processing units each of said plurality of computation results obtained for said 2^n states with said immediately preceding processing timing are read from a storage area of a memory, and said computation results obtained with said present processing timing for said 2^n states are stored in said storage area.

--5. (Amended) A data-receiving unit having a decoding unit for carrying out a maximum-likelihood decoding process based on a Viterbi algorithm on a data train completing a convolution-encoding process, said decoding unit comprising:

computation means for carrying out a trellis computation for decoding said received data train completing said convolution-encoding process; and

control means for controlling said trellis computation to be performed by said computation means with a plurality of processing timings in a plurality of processing units each corresponding to a process carried out on n bits of

pre-encoding data, wherein each of said plurality of processing units is parallel processing performed on computation results obtained for 2^n states with one of said plurality of processing timings, immediately preceding a present one of said plurality of processing timings to obtain a plurality of computation results with said present processing timing for said 2^n states.

a² --6. (Amended) The data-receiving unit according to claim 5, further comprising a memory for storing said plurality of computation results obtained with said immediately preceding processing timing and said present processing timing, wherein during each of said processing units said plurality of computation results obtained for 2^n states with said immediately preceding processing timing are read from a storage area of said memory and said computation results found with said present processing timing for said 2^n states are stored said storage area.

--7. (Amended) A data-receiving method, comprising the step of performing maximum-likelihood decoding processing based on a Viterbi algorithm on a received data train completing a convolution-encoding process, wherein in said decoding processing a trellis computation for decoding said data train completing said convolution-encoding process is performed with a plurality of processing timings in a plurality of processing units each corresponding to a process

a² performed on n bits of pre-encoding data, and each of said processing units is parallel processing carried out on a plurality of computation results obtained for 2ⁿ states with one of said plurality of processing timings immediately preceding a present one of said plurality of processing timings to find said plurality of computation results with said present processing timing for said 2ⁿ states.

--8. (Amended) The data-receiving method according to claim 7, wherein in each of said plurality of processing units said plurality of computation results obtained for said 2ⁿ states with said immediately preceding processing timing are read from a storage area of a memory and said computation results found with said present processing timing for said 2ⁿ states are stored in said storage area.--

REMARKS

Claims 1-8 remain in the application and have been amended hereby.

As will be noted from the Declaration, Applicants are citizens and residents of Japan and this application originated there.

Accordingly, the amendments to the specification are made to place the application in idiomatic English, and the claims are amended to place them in better condition for examination.

An early and favorable examination on the merits is